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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Horst Keller

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EXAMINER

KHATRI, PRASHANT J

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,009	Applicant(s) KELLER ET AL.	
	Examiner PRASHANT J. KHATRI	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/6/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: d, 7', and 10 in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. It is noted that the drawing Figure 1 entered in by Applicant was found as prior art in DE3612857 as Figure 1 in prior art.

Specification

1. The abstract of the disclosure is objected to because there is a comma, commonly used as European notation of a decimal point. Additionally the title of the abstract should be "Abstract" not "Summary". Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: commas as opposed to decimal points throughout the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.
3. Claim 1 recites the limitation "the fiber mass" in second to last line. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 7 and 8 recite the limitation "the mineral fiber felt" in the second line. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 9 recites the limitation "said section" in second line. There is insufficient antecedent basis for this limitation in the claim.
6. Regarding claim 1, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
7. Regarding claim 4, Applicant states a density range of "8 to 14 kg/m". As this is not considered to be density value, Examiner assumes the length value was a cubic value and treated as such for examination purposes.

8. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The compression ratio is unclear as the standard format for compression ratios comprises a higher number to the left of the colon mark and the lower number to the left of the colon mark.

9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad recitation 8 to 14 kg/m, and the claim also recites 11 to 14 kg/m³ and 13 kg/m³ which are the narrower statements of the range/limitation.

10. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent

Art Unit: 1794

protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 5 recites the broad recitation 18 to 25 kg/m³, and the claim also recites 19 to 24 kg/m³ and 23 kg/m³ which are the narrower statements of the range/limitation.

11. Regarding claim 6, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

12. Regarding claim 7, it is unclear what the phrase "eventually free of a fulling process" comprises.

13. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then

Art Unit: 1794

narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 8 recites the broad recitation 1:3 until 1:8, and the claim also recites 1:4 until 1:6 which is the narrower statement of the range/limitation.

14. Regarding claim 13, it is unclear what the "other" material is as Applicant provides no guidance as to the composition.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-7 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battigelli et al. (**US 5601628**) in view of Erskine (**US 6074967**), Bernard et al. (**US 5554324**), and Vignesoult et al. (**US 6284684**).

17. Battigelli et al. disclose a method for the production of mineral wool and mineral wool produced thereof. Prior art discloses a material composition comprising common

Art Unit: 1794

mineral-based compounds found within comparable silica-based insulation materials (**col. 9, lines 1+**). Concerning the density of the material, prior art discloses the material produced have an F/5g value that corresponds to a Micronaire value wherein said Micronaire value corresponds to having a density lower than 40 kg/m^3 (**col. 9, lines 39+**). Furthermore, it is established that lighter products will have a Micronaire value of 3 and below whereas heavier products will have a Micronaire value of 4 (**col. 9, lines 44+**). Examiner takes the position that the values for the F/5g as shown by prior art within the table of less than 3 will therefore have a lower density. As shown by prior art, fiberization occurs at temperatures of at least 1200°C , therefore Examiner takes the position that the fusion point of the material would therefore occur at a temperature higher than 1200°C , which would meet the parameters of the present claim. It is noted, however, that prior art discloses that the formation of beads is dependent on viscosity (**col. 4, lines 35+**) and the pressure of the blower within the apparatus (**col. 8, lines 42+**). Examiner takes the position that the reduction of beads is an optimization feature and may be adjusted by varying the pressure of the blower. It is noted that the process is an internal centrifuging process in a spinner (**abstract**). However, prior art is silent to the use of a binding, the exact claimed composition, and fiber diameters produced.

18. Erskine discloses the use of a fibrous binding agent comprised of cellulose fibers and the like (**col. 3, lines 34+**). Furthermore, the fibrous agent may be present at amounts of 5%, 7%, and 10% by weight of the total ingredients (**col. 4, lines 27+**). Examiner notes that the binding agent inclusion of an about 5% would therefore meet

Art Unit: 1794

the present claim. Furthermore, it is noted that cellulose is considered to be an organic material and would thereby meet the presently claimed binding material.

19. Bernard et al. discloses a method for producing mineral wool. Examiner notes that this reference is incorporated by reference by Battigelli and Battigelli is incorporated into the present disclosure (**col. 18, lines 19+**). It is noted that the apparatus disclosed by prior art produces fibers having diameters of about 3.2 microns to 4.7 microns, wherein the fiber diameters are dependent on pull rate and temperature (**col. 18, lines 26+**).

20. Vignesoult et al. disclose a mineral wool composition comprising the following:

SiO ₂	39-55%,
Al ₂ O ₃	16-27%,
CaO	3-35%,
MgO	0-35%,
Na ₂ O	0-15%,
K ₂ O	0-15%,
R ₂ O (Na ₂ O + K ₂ O)	10-17%,
P ₂ O ₅	0-3%,
Fe ₂ O ₃	0-15%,
B ₂ O ₃	0-8%,
TiO ₂	0-3%,

21. The disclosed ranges as shown above encompass or equal the presently claimed ranges. Prior art further discloses the composition may include 2% to 3% of unanalyzed impurities. Concerning the alkali/earth alkali ratio, Examiner notes that Ex. 2 in Table 1 shows that the ratio is less than 1 (**col. 4, lines 30-31**). Examiner takes the position that the unanalyzed impurities are equivalent to the materials known as "other" as Applicant is silent to the exact composition of the "other" material. As shown by prior art in Table 1, the material exhibits satisfactory levels of biosolubility. Examiner takes

Art Unit: 1794

the position that the material would therefore meet the standard presently claimed in claim 10.

22. Note that while Erskine does not disclose all the features of the present claimed invention, Erskine is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nieveit*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of binders in mineral wool materials in order to decrease the brittleness of the material and in combination with the primary reference, discloses the presently claimed invention.

23. All of the elements were known within the art in individual disclosures; however each is silent to containing all the elements presently claimed. The motivation to combine Erskine to Battigelli and Bernard stems from the fact that binding agents allow for an increase in strength and decrease in brittleness when the material undergoes compression for shipping. Furthermore, it is noted that the increase in strength decreases the amount of failed products and thereby increasing consumer satisfaction. Therefore, it would have been obvious to one of ordinary skill in the art to apply a binder disclosed by Erskine into the materials disclosed by Bernard and Battigelli. Additionally, the formation of beads during processing is known within the art to be the cause of product failure. Examiner notes that Battigelli discloses the formation of beads may be reduced by optimizing blower pressure. Therefore, it would have been obvious to one of ordinary skill in the art to adjust the blower pressure to minimize the formation of

beads and thereby reduce product failure. Vignesoult et al. disclose a mineral wool composition that encompasses the presently claimed ranges. The motivation to use the composition into the process disclosed by Battigelli and Bernard is that the composition of Vignesoult yields a material that has satisfactory biosolubility and considered to be less environmentally and physiologically harmful to lifeforms. Thus, it would have been obvious to include this composition to create an environmentally friendly material in conjunction with the binders disclosed by Erskine, which improve strength for shipping purposes to the processes disclosed by Battigelli and Bernard. Concerning the standards that are presently claimed in claims 4-6, 10, and 12, Examiner takes the position that if the materials meet the elements that are presently claimed, the material would therefore meet the standards that are presently claimed.

24. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Battigelli et al. in view of Erskine, Bernard et al., and Vignesoult et al. as applied to claims 1 and 7 above, and further in view of Syme et al. (**US 5900298**).

25. Battigelli et al., Erskine, and Bernard et al. are silent to the compression ratio.

26. Syme et al. disclose a mineral fiber insulation that is of a density that encompasses the presently claimed density when converted (**col. 4, lines 59+**).

Additionally, prior art discloses a range for compression ratios that are suitable for shipping purposes of 4 to 10:1 (**col. 10, lines 65+**). Examiner notes that the ratios signify the roll having an uncompressed material as the first number and the second number as the compressed material. Thus, the compression ratio is equivalent to the

presently claimed material as the first number is the compressed material and the second number is the uncompressed material.

27. However, note that while Syme et al. do not disclose all the features of the present claimed invention, Syme et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the range for compression ratios suitable for shipping purposes and it would have been obvious to combine with the primary reference, in order to disclose the presently claimed invention.

28. Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battigelli et al. in view of Erskine and Bernard et al. as applied to claim 1 above, and further in view of Bihy et al. (**DE3612857**).

29. Battigelli et al., Erskine, and Bernard et al. disclose the above but are silent to the use of markings as cutting aids and within a system for clamping insulation material between rafters.

30. Bihy et al. show the use of cutting markings that appears to be the exact same as the claimed invention. Figure 1 of prior art shows the marking regions wherein a knife or other cutting instrument may be used to cut an appropriate amount of material for use as insulation. Concerning claim 15, prior art discloses a mineral fiber insulating material to be used as a roof rafter clamping material between adjacent beams (**FIG. 2**).

Art Unit: 1794

31. Note that while Bihiy et al. do not disclose all the features of the present claimed invention, Bihiy et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of mineral wool materials as roof insulation materials and in combination with the primary reference, discloses the presently claimed invention.

32. All of the elements were known within the art individually but not within a single disclosure for all of the claimed elements. Bihiy et al. disclose a mineral fiber insulation material that has markings on the surface for cutting purposes and further the system for applying the material to roof rafters. The motivation to combine is drawn from the fact the material disclosed when combined by Battigelli et al., Erskine, and Bernard et al. provide for an environmentally safe and strong material that will provide excellent thermal insulation properties. Therefore, it would have been obvious to one of ordinary skill in the art to apply a binder material for shipping purposes and further, markings for sizing purposes. Furthermore, it would have been obvious to one of ordinary skill in the art to take advantage of the mineral insulation in a system wherein the insulation is aligned and clamped down between beams to take advantage of the environmentally-friendly elements and strength elements for a superior product compared to comparable products within the marketplace.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DE19604238, EP1182177, and EP0583791. DE19604238 discloses some of the elements but is silent to a binding material. EP1182177 discloses a binder material but not the presently claimed amount. EP0583791 is not used but the US equivalents were used.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is (571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M. (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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